11. (Amended) A [The] coated optical fiber comprising at least one radiation-cured layer and an optical fiber substrate [of claim 1], wherein said at least one radiation-cured layer comprises a pre-cure composition comprising:

a) about 10% to about 95% of at least one reactive oligomer;

b) about 10% to about 95% of at least one reactive diluent;

c) optionally, about 0 to about 10% of at least one photoinitiator; and

d) optionally, about 0 to about 10% of at least one additive,

wherein said optical fiber substrate comprises a member of the group consisting of glass and thermoplastics,

wherein said radiation-cured layer has been cured by exposure to [electron beam radiation has an energy] less than about 125 kV of electron beam radiation, and

wherein said at least one layer comprises a member selected from the group consisting of an inner primary coating, an ink layer and a colored outer primary layer.

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14. (Amended) A coated optical fiber comprising at least one radiation cured matrix material coating composition and an optical fiber substrate,

wherein said at least one radiation-cured matrix material coating composition has been cured by exposure to [low power] electron beam radiation having an energy less than about 125 kV, and effective to substantially cure said at least one radiation-cured matrix material coating composition, but substantially avoid degrading said optical fiber substrate,

wherein said at least one radiation-cured matrix material coating composition comprises:

a) about 10% to about 90% of at least one reactive oligomer;

b) about 10% to about 80% of at least one reactive diluent;

c) optionally, about 0 to about 10% of at least one photoinitiator;

d) optionally, about 0 to about 10% of at least one additive, and

wherein said coated optical fiber comprises a member selected from the group consisting of glass and thermoplastics.

5 ~~6~~. (Amended) A method of curing at least one radiation-curable layer surrounding an optical fiber substrate comprising the steps of:

a) applying at least one radiation-curable layer surrounding said optical fiber substrate; and

Q2 concl'd.

b) substantially curing said at least one layer with about 125 kV of electron beam radiation,

wherein the radiation-cured layer comprises a member selected from the group consisting of an inner primary coating, an ink layer and an outer primary layer.

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10 ~~11~~. (Amended) A [The] method of [claim 9] curing at least one radiation-curable layer surrounding an optical fiber substrate comprising the steps of:

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a) applying at least one radiation-curable layer surrounding said optical fiber substrate; and

b) substantially curing said at least one layer with electron beam radiation less than or equal to about 60 kV,

wherein said layer is substantially cured to a depth of about 25 mm or less.

In claim 12, line 1, replace "claim 9" with --claim 11--.

In claim 17, line 4, after "at least" insert --one--.

REMARKS

Preliminarily, Applicants gratefully acknowledge the indication of allowable subject matter in claims 2, 3, 7, 11-16, and 18. Claims 1, 2, 5, 6, 11, 12 and 17 have been amended. Support for the amendments can be found throughout the Application as originally filed. Accordingly, no new matter has been added by these amendments.

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